

Customized Wall Mounted Tritium in Room Air Monitor

Model: 607C-0.8U0.8Ci

Application

607C-0.8U0.8Ci - Sensetec Engineering Tritium in Air Monitor (hereinafter referred as 607C) is a 19" rack mount type instrument. It is customized from default 607 model.

607C-0.8U0.8Ci has all characteristics of default 607 except its customized sensitivity and measuring range. Please refer to the model 607 datasheet for its default characteristics. (Please insert a link to model 607 datasheet here)

The customizations of 607C-0.8U0.8Ci are as below:

- Sensitivity: $0.8\mu\text{Ci}/\text{m}^3$
- Measuring range: $0.8\mu\text{Ci}/\text{m}^3$ to $0.8\text{Ci}/\text{m}^3$.
- $0.8\mu\text{Ci}/\text{m}^3$ to $0.8\text{Ci}/\text{m}^3$ is defined as the full measuring range for all characteristic for 607C-0.8U0.8Ci, i.e. Full measuring range noble gas compensation, full measuring range gamma compensation, etc.



Control, display, communication system & quadruple ion chamber

Passive dryer 651, could be replaced by active dryer 654

607C-0.8U0.8Ci overall view

Specification – 607C-0.8U0.8Ci

Customized Wall Mounted Tritium in Room Air Monitor

Performance:

- Sensitivity: Better than $0.8\mu\text{Ci}/\text{m}^3$

- Accuracy: $1\mu\text{Ci}/\text{m}^3$ from 1 to $100\mu\text{Ci}/\text{m}^3$,
< 1% from $100\mu\text{Ci}/\text{m}^3$ to $0.8\text{Ci}/\text{m}^3$
- Measuring range: $0.8\mu\text{Ci}/\text{m}^3$ to $0.8\text{Ci}/\text{m}^3$
- Compensation range: Full measuring range, $0.8\mu\text{Ci}/\text{m}^3$ to $0.8\text{Ci}/\text{m}^3$
- Flow Rate: 1 to 10L/min,
KNF positive displacement diaphragm pump,
brushless, 10000hrs and up
- Response time: < 10S
- Gamma measurement: 0.1mR/Hour to 10R/Hour
- Zero stability: Better than $2\mu\text{Ci}/\text{m}^3$ from 0 to 50 °C
- Stability with long term: <±3% per 30 days
- Gamma compensation: < $10\mu\text{Ci}/\text{m}^3$ at 10mR; <10% within 20mR/HR
- Tritium discrimination: Elemental tritium, HTO & T₂O discrimination
via 651 Dryer, 652D catalyst converter and
software computation
- Noble gas cancellation: Full Measuring range, Passive Silica gel drier is
placed on the front panel, flowing air samples
between measuring chambers and compensation
chambers
- Radon compensation: Software discrimination and elimination
- Background cancellation: Noble gas compensation ratio: > 150:1. Gamma
compensation: < $10\mu\text{Ci}/\text{m}^3$ at 10mR/Hr,
<10% within 20mR/HR

Structure

- Ion chambers: 4 ion chambers,
2 for measuring and 2 for compensation,
500mL for each chamber
- Ion chamber volume: Default, 1L: measuring, 1L: compensation
- Ion trap: Yes, built-in for each chamber
- Gas ports: 3/8" push to collect
- Air hose: Default, 3 feet for inlet and outlet
- Gas filter: Built-in, replaceable

- Ion chamber purging: Yes, via cartridge heater for ion chamber decontamination and condensation prevention
- Control panel display: 7 Inch TFT LCD touch screen for numerical, graphical model display and operation
LED for digital data and rate bar graph display
- Digits display: 0.56" LED display both for tritium and Gamma

Output and communication:

- Communication: RS232, RS485 and ethernet
- Analog output: 4-20mA and 0-3Vdc
- Audio and visual alarm: Low and high alarm within 30 seconds
- Data logging: Yes, frequency varies from 1s to 1hr, user settable

Power, operational conditions and dimension:

- Power supply: 220/115VAC @ 50/60HZ
- Power consumption: < 1A
- Warm-up time: no need
- Operational humidity : 95%RH
- Operational temperature: 0 to 50°C,
- Dimension: 5U, W19"x H8.72" x D10.12"
- Weight: 20Kgs